ForesTalk

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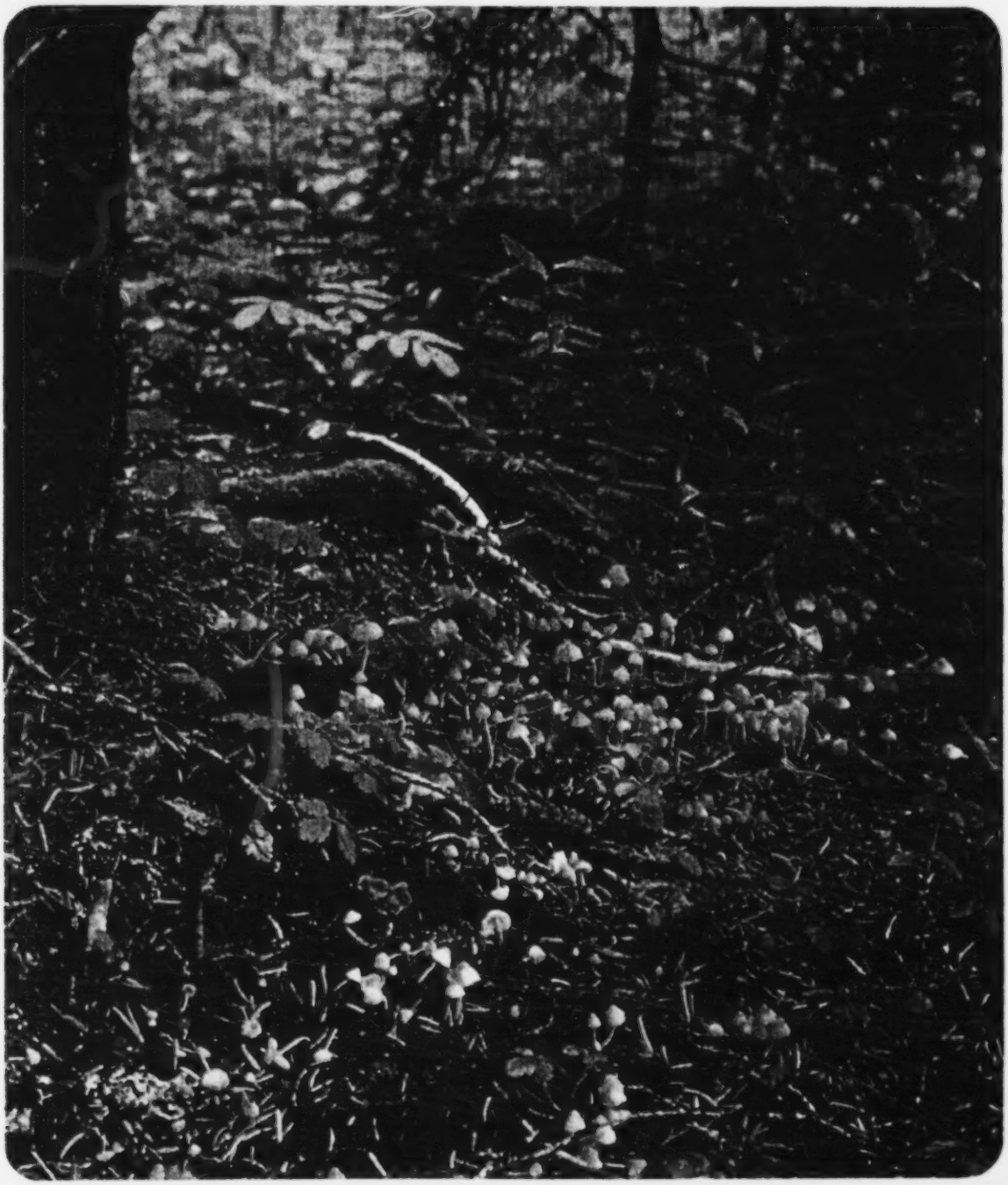

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ForesTalk

Autumn — 1973

THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF LANDS, FORESTS
AND WATER RESOURCES

THE HONOURABLE ROBERT WILLIAMS
MINISTER

IAN T. CAMERON
CHIEF FORESTER

A. G. DAGG
EDITOR

BARBARA DAVIES and PETER ROBIN
STAFF PHOTOGRAPHERS

POLICY STATEMENT

The objective of the British Columbia Forest Service, as the forest administrative agency for the government of British Columbia, is to develop and enforce policies which will ensure for all time the proper balance of timber supply, forage production, forest recreation, wildlife protection and environmental preservation on the Crown forest lands of the province.

COVER PHOTO

Under the canopy of a mature forest, grasses and shrubs often give way to colourful fungi.

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Canadian Cellulose Company

Acquisition of 79 percent of the 12 million shares of Canadian Cellulose Co. by the British Columbia Government has resulted in a refreshing change in policy for the big sprawling forest complex. But contrary to a widespread impression, the government will not be involved in operating management.

As for any major shareholder, it will obviously have a strong voice in decisions relating to expansion, diversification or capital expenditure but Resources Minister Robert Williams who consumated the deal intends to rely on the Board of Directors, President Ronald M. Gross, and the other members of the management team to operate the business.

President Ronald M. Gross

Full or partial government ownership of companies without actual participation in operations is not uncommon in other countries, particularly in Europe. In the case of Canadian Cellulose, production, sales, labour relations, plant maintenance and other similar tasks will remain in the hands of carefully chosen and competent personnel with extensive experience in the forest industry.

They in turn will take direction from the new nine-man board of directors, six of whom are Canadians and four of whom are British Columbians. Others are associated with transportation, international trade, investment banking, government relations, and marketing of forest products. None are members of our government.

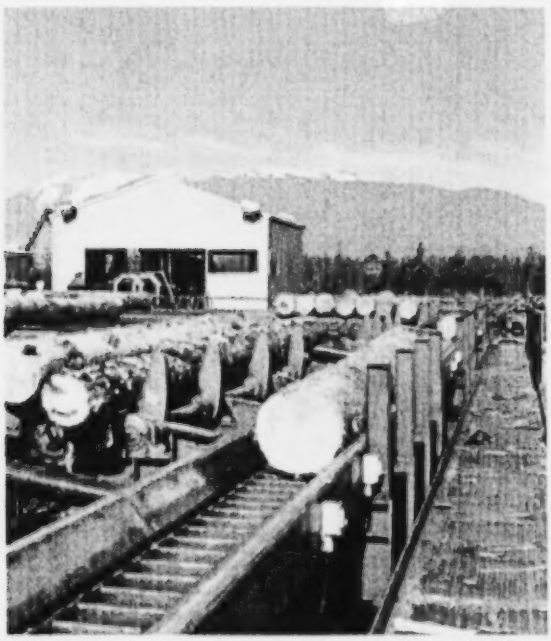
To administer the government's shareholding in Canadian Cellulose, a holding company has been incorporated and named British Columbia Cellulose Company. The five directors of this agency include Resources Minister Williams.

The big difference in the new setup is that it is no longer necessary to refer problems to absentee owners in New York whose motives were related directly to production and profit without particular concern for the B.C. community or its people.

In a recent interview, Mr. Gross said "I particularly want to correct problems affecting the human element of the company which have developed because of a lack of attention to or expenditure on plant safety, sanitation, medical care and employee and community relations."

"Furthermore," he added "we must all realize that our products are marketed in Europe, U.S.A. and Japan, and the quality of those products as well as our reliability in making delivery will reflect on the B.C. community as a whole as well as the company."

Canadian Cellulose, formerly Columbia Cellulose Company (Colcel), embraces three pulp mills and three lumber mills, and employs over 2800 people. They draw their raw material from two Tree Farm Licences (T.F.L.s) covering over nine million acres and containing over three million acres of productive forest land.



Modernized sawmill at Terrace produces lumber and chips.

Tree Farm Licence No. 1 is vast and sprawling.

Watson Island complex near Prince Rupert includes two pulp mills and dock for ocean-going ships.

Total allowable annual cut as established by the Forest Service is 113 million cubic feet but actual harvest has never reached this level and could be increased.

Facilities and resources are widely separated. One pulp mill and one saw mill are located at Castlegar in the West Kootenays. This sector of the company has been a consistent money maker and according to Ron Gross is overdue for expansion.

"The natural lines of development indicate that a second lumber mill and added capacity to the Castlegar pulp mill are logical steps. Studies now under way should confirm this within the next few months", he said.

The other sector, in north-western B.C., includes two pulp mills at Prince Rupert, an efficient medium sized saw mill at Terrace, another at Kitwanga plus the associated logging, sorting and transportation facilities.

Of the two pulp mills, one was built in 1949 and designed primarly to produce acetate fibres used in the manufacture of fabrics by Celanese Corporation, the former parent company.

This plant has not been well maintained, has corrosion problems and is obsolescent. It employs the sulphite dissolving process in which some chemicals cannot be recycled, so pollution from it is difficult to control.

However, although demand for this special pulp is declining, a substantial part of the production will be bought under contract by Celanese Corporation for the next five years. The operation is expected to be marginally profitable.

The second pulp mill at Prince Rupert was built in 1967, is a good producer of widely used kraft pulp and has operated at or near its capacity since 1971. Subject to provision of the essential wood resource at reasonable costs, it should be a long

term money-maker.

With regard to the old sulphite plant, President Ron Gross says, "We are looking for ways to make it more profitable. Both technical and market studies will be conducted to show us the changes required in product and equipment for an economic and clean operation."

He went on to say, "Our fortunes are closely tied to the economical progress of north-western B.C. and of course the recent joint federal-provincial rail, port and resource development program is most encouraging. So too is the new freight rate agreement for the movement of chips and wood products."

Better use of timber resources will be given high priority and the practice of converting logs suitable for good lumber directly to pulp will be reduced as rapidly as possible. In 1968-69 only seven percent of the raw material processed by the Prince Rupert pulp mills was residual chips. Even now it is only 18-20 percent.

Mr. Gross considers that for long term viability, a 60 percent chip input must be achieved. He expects to attain this level within 3-5 years and hopes to raise it eventually to 80 percent.

Chips are a by-product of lumber and plywood mills, and there is a clear requirement for more of these in the region. Just how many, of what type and capacity, and where they should be located are all subjects of another study which is already well advanced.

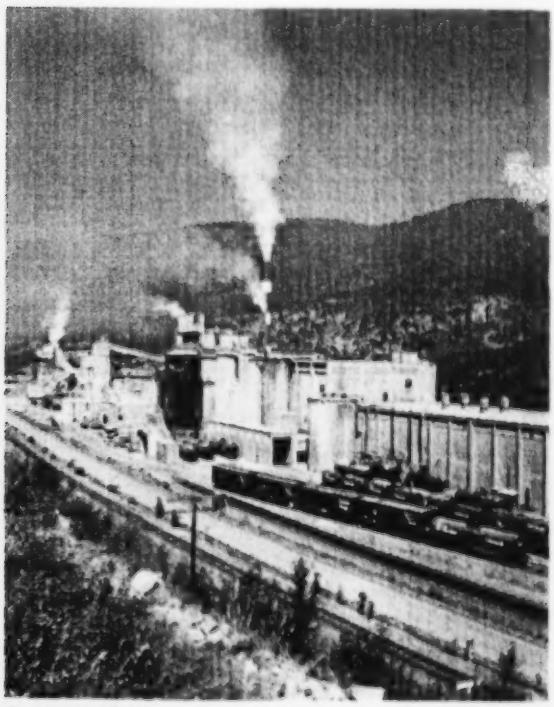
Ron Gross would prefer to see any new mills developed by local independent operators but he does want working agreements whereby their total chip production would be sold to his company at the going price.

There is a great deal of optimism in the north-west regarding changes being wrought by the new owners of Canadian Cellulose.

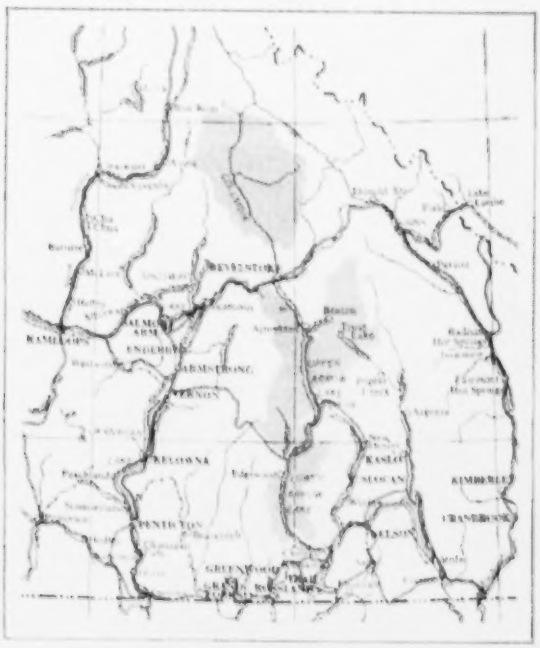
Mayor Lloyd Johnstone of Terrace states that before the B.C. government involvement in the company, there was degree of uncertainty about the future and some reluctance by local businessmen to make capital investments for expansion and new equipment.

"Now people feel more secure and confident," he said, "and there are indications that several new businesses plan to establish in the Terrace area."

Prince Rupert Chamber of Commerce President Noel Woodworth reports there were at first some mixed feelings about the government getting involved in business but now most people in his area realize that the step was taken in their own interests



Pulp mill at Castlegar.



Tree Farm Licence No. 23.

New growth is already showing green on five-year-old logging patches in Kitsumkalum valley.

Logs harvested up the Nass valley are floated down river to Iceberg Bay and towed to Prince Rupert pulp mills.

Over 40 carloads of logs are hauled daily from Terrace to Prince Rupert.

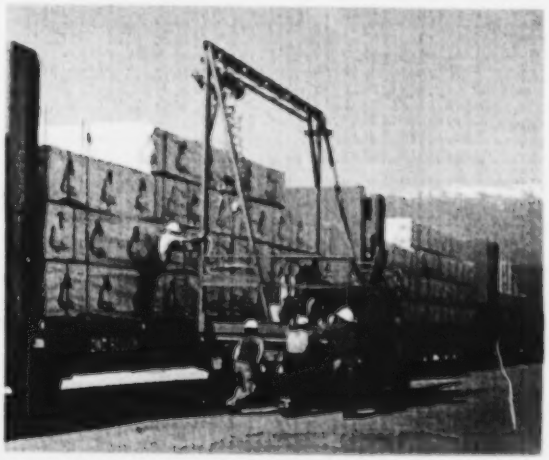
and is important in the over-all development of the north-west.

As the Canadian Cellulose predecessor, Columbia Cellulose, consistently lost money totalling $95 million since 1966, the inevitable question is: 'When will the new company make a profit and when will it declare a dividend for its shareholders?'

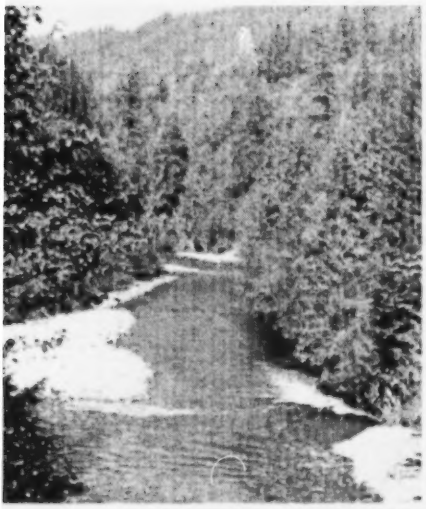
To this, President Gross notes that the company has been making money since August, 1972, and should, under normal circumstances, continue to do so.

As for payment of dividends, he considers this to be a matter for the board of directors to decide but in his opinion it is now most important to build up the equity of the company and prove its ability to make a sustained healthy profit.

He is confident that it can and will.



Kiln-dried lumber is packaged and shipped to eastern markets.



Chilliwack Forest... *Serving All Interests*

There is only one easy access to the Chilliwack Provincial Forest and it is somewhat like the gate to a walled estate. It leads to a mountain-enclosed valley supporting luxuriant growth, spectacular scenery and a broad spectrum of natural facilities for public enjoyment. Unlike a private estate, most of this forest is open to the public at all times.

Once in, the visitor can observe and participate in a wide variety of activities. In fact, the region provides an excellent example of the forest industry and the outdoor recreationist working and playing side by side with little or no interference. This is "integrated use" of our forest land in the true sense.

The Chilliwack Forest covers 170,000 acres, is located about 75 miles east of Vancouver and lies almost entirely within the Canadian portion of the Chilliwack River watershed.

Nearly 100 such forest reserves have been set up by provincial law and established primarily for the perpetual growing of timber. However, in keeping with Forest Service policy, they are being managed and developed for forest recreation, for wildlife protection and environmental preservation as well.

Unless one hikes in over the mountains or flies in to Chilliwack Lake, entrance to the Chilliwack Forest is by road from Vedder Crossing, about four miles south of the city of Chilliwack. Pavement soon gives way to a good gravel forest development road, most of which was built by the Forest Service in 1958-62.

This road follows the Chilliwack River in a gentle climb of nearly 2,000 feet to the north end of the lake bearing the same name. There it narrows to single lane width and snakes along the steep eastern shoreline of the lake to Paleface and Depot Creeks where choice timber is being felled and trucked out to mills. The new lakeside section of the road is necessarily closed to the public except on weekends and public holidays but there are no restrictions on the rest of it.

The Chilliwack River is one of the best in the province for steelheading and trout fishing. Kokanee, the land-locked salmon, and Dolly Varden abound in Chilliwack Lake. Muledeer, a few elk, black bears, cougars, bobcats, goats and grouse are all there for the hunter.

There are close to a dozen good hiking trails in the forest including the Centennial Trail which traverses the full length of the reserve as it winds its way from Simon Fraser University in Burnaby to Manning Park. Some trails offer reasonably easy hiking but others are more precipitous and are designed for those with considerable experience and good equipment.

Chilliwack Lake Park covering 400 acres at the north end of the lake is being developed by the Parks Branch. Already it offers the traveller a boat launching ramp, camping sites, picnic tables, garbage and toilet facilities as well as magnificent scenery.

In addition, the Forest Service is developing several other campsites with tenting grounds, wood supplies, toilet facilities and parking. Two such sites were opened last summer at Post Creek and Tamihi Creek. More will follow.

Winter usually brings three or more feet of snow and creates ideal conditions for snowmobiling and cross-country skiing. For those seeking the complete escape to wilderness, the region has much to offer, particularly on the upper levels of the many peaks which rise to seven thousand feet or more and wear broad expanses of bright green alpine meadow on their sloping shoulders.

Industrial activity within the forest consists mainly of five large logging operations and nearly 50 small independent outfits. The big companies with modern equipment harvest their crops of hemlock, balsam, fir and cedar in the small steep valleys which lead off the main river at frequent intervals like the legs of a centipede.

Most of the independents are engaged in salvaging "dead and down" timber which has been killed in recent years by forest fires. Much of it is red cedar which is fed to shake and shingle mills in the local region.

About 230 men are fully employed in the removal of over eight million cubic feet of timber from the Chilliwack Forest each year. Their annual payroll is almost $1 million and the market value of their unprocessed harvest is over $4 million.

Permanent establishments within the forest are few but by far the biggest is one of the Forest Service's nurseries where seedling production is expected to reach 15 million annually within two years. Others are three forest correction camps operated jointly by the Attorney General's Department and the Forest Service. Each accommodates about 40 prisoners who are usefully employed in various facets of forestry during their confinement.

During the past century and particularly in the 1930s several big forest fires killed large quantities of timber in the reserve. More has been extracted for commercial purposes. Despite this and because of widespread excellent natural regeneration as well as considerable planting, the region is now rich in new growth. Some of it will be ready for harvesting in 10 to 20 years when the crop cycle will start again.

This then is the Chilliwack Provincial Forest. It has something in it for everyone and it is being managed on a long term basis for the optimum benefit of all.

The Excesses and Shortages of . . .

CHIPS

BY RAY WORMALD

The timber industry of British Columbia is in the chips—literally. Thousands of tons of little chunks of wood derived from logs and lumber mill residue which were formerly burned or otherwise wasted. And from these wood chips come tons of paper, cardboard and a host of other products to fulfil the market appetites of many nations. The chip business is big, and getting bigger by the year. There are many comparative production figures available, but perhaps the newsprint figures, in themselves, tell the story: In 1952 British Columbia's newsprint production was 425,390 tons. In 1972 that figure had zoomed to more than 1,400,000 tons. Or: in 1952, 202,360 tons of sulphate (Kraft) pulp were produced—in 1972, 3,276,548 tons!

Recent Slump

Granted, a few years ago the pulp and paper industry went through a prolonged slump. It's geared to world markets and demands, fluctuating prices, and increasingly tough international competition. But 1972 saw a major upswing; it's continuing this year; and there's every indication it will carry on. More and more countries are needing more and more paper products.

There are now some 25 pulp and paper mills in the province. For their raw material many of them depend on sawmills and chipping plants, where wood not suitable for lumber production, and small logs (formerly left in the woods) are converted into chips. In many mills even trimmed ends of lumber get chewed up for delivery to pulp-producing plants.

Problems

As in any fast-growing enterprise, there have been—and are—problems. Of considerable concern to Resources Minister Robert Williams is the export of several million dollars worth of chips each year. As unprocessed materials, they bring very little revenue to the government. However, if converted to pulp or paper before export, their value to the overall provincial economy would be much greater.

Undoubtedly the most serious single problem today is basically one involving transportation—getting the chips from their source to the pulp mills.

This problem is most acute in the northern and central interior regions of the province. Pulp mills are producing to capacity but their stock piles are dwindling and they may not get enough chips to continue at such a rate. The provincial government has undertaken to build 100 new railway chip cars, but they won't be ready before the end of this year.

While rail movement of the chips is most economical, especially designed trucks are also used extensively for this purpose in the interior areas—but all such available vehicles are already booked and operating on an "around the clock" basis.

The problem is not so acute at coastal points, where huge barges and powerful tugs handle the chip traffic.

Distance a Problem

The "base" of the problem, of course, lies in the fact that in a number of cases the supply of wood chips is far removed from the pulp mills that need them. It's for this reason the provincial government is now encouraging the establishment of several new sawmilling operations—particularly in the northwest region.

The relatively ideal situation in this business is an almost continuous "flow" of chips from the mill to the pulp makers.

The absence of such a "flow", in turn, creates still further problems in the chip industry. There's the vital matter of storage. Keeping them under cover and away from the elements calls for big and expensive buildings. Piling them up like mountains outside takes up valuable space. And in such storage the chips can rot and deteriorate. They sometimes actually ferment. They tend to stain. And in such great piles there is also the possibility of spontaneous combustion.

Fire a Threat

Early last July damage estimated in the hundreds of thousands of dollars resulted when fire ate its way through a big chip pile of the Northwoods Mill near Princeton. The chip mountain contained some 40,000 units, valued at approximately $360,000. Spontaneous combustion was believed to have caused the costly fire.

There are also winter problems. Because of their initial high moisture content, chips will literally freeze in railway cars and trucks—creating serious unloading problems.

However, all is not gloom. Between provincial government authorities and the industry itself—and they're meeting together more often now to discuss mutual problems—solutions are being sought, and found. Such as a recently-announced new railway freight agreement covering a great portion of northwest B.C. will go a long way to helping the pulp and paper industry in that region. In essence, the agreement calls for the Canadian National Railway to provide a blanket chip rate (considerably less than present levies) for chips going generally westward in return for a government-guaranteed volume of lumber going eastward and out of the province.

Of course there's always the great and ever-present overall potential problem over which the B.C. industry or government has no control—international market conditions.

Right now the demand is high, and those involved are betting that the little chunks of orange-yellow wood will continue to be a "blue chip" enterprise.

Thousands of trees were killed when waters rose in 1952.

Clean-up now probable for . . . **Nechako Reservoir**

Development of hydro-electric power in British Columbia has frequently resulted in the flooding of scenic mountain valleys and the drowning of thousands of acres of fine forests.

Until recently there was no great concern for this ruthlessness, particularly in regions remote from major population centres. Now however, there is a changed and more critical attitude.

Not only are concerted and costly efforts being made to remove and utilize all commercial timber from new flood basins, but non-usable wood debris is being gathered and disposed of. The Mica Dam reservoir is an example.

Many of the situations created in the past were not just wasteful of good timber, but they remain unpleasant to the eye and hazardous for marine craft and some wildlife. The 358-square mile Nechako reservoir in the central interior is typical of several, and bigger than most.

Back in 1950-52 the Aluminum Co. of Canada built the Kenney Dam across the Nechako River about 50 miles south-west of Vanderhoof. It raised the water level behind the dam over 300 feet, turned mountain streams into lakes and made big lakes out of small ones.

The rising waters covered great expanses of forest land containing prime stands of spruce, lodgepole pine and some hemlock. Many trees were completely covered but tens of thousands still show their heads above the waters of Ootsa, Whitesail, Tahtsa and Tetachuk Lakes.

The reservoir extends nearly 150 miles west to within 20 miles of salt water where it is dropped over half a mile through a 10-mile tunnel to Kemano. There it turns the turbines which make the electric power for the Alcan smelter at Kitimat.

Total length of the newly created shorelines is nearly 1,000 miles and most of it is dotted with tree tops. The logs are now rotten and of no value but beneath the lake surface the timber is sound and well preserved.

Now, over 20 years after the waters first rose, there is a strong probability that the whole mess will be cleaned up

Floating logging camp has been at work since 1970.

and a vast amount of marketable timber salvaged.

Under the direction of Resources Minister Robert Williams, the B.C. Forest Service is conducting a pilot operation to determine the feasibility of a major project. Preliminary results look promising.

In 1970, the inventive Richard and Michael Bond of Vanderhoof designed a self-propelled steel barge equipped to nip off standing trees at the butt-end as much as 120 feet below the water surface.

They obtained a license to harvest timber from the flooded area for the next 10 years with the proviso that they pay the government the standard stumpage fees normally charged for salvaged timber.

The barge can be moved in any direction by a single fully rotating propeller located on the bottom of the hull. As the floating logging camp approaches a tree-top, a three-ton grappling device suspended over the bow by a cable from a heavy steel stanchion encircles the trunk.

An operator then lowers the heavy contrivance to the bottom of the tree on the lake bed by paying out cable from a drum located amidships. During this action the branches of the tree are broken off leaving a relatively clean trunk.

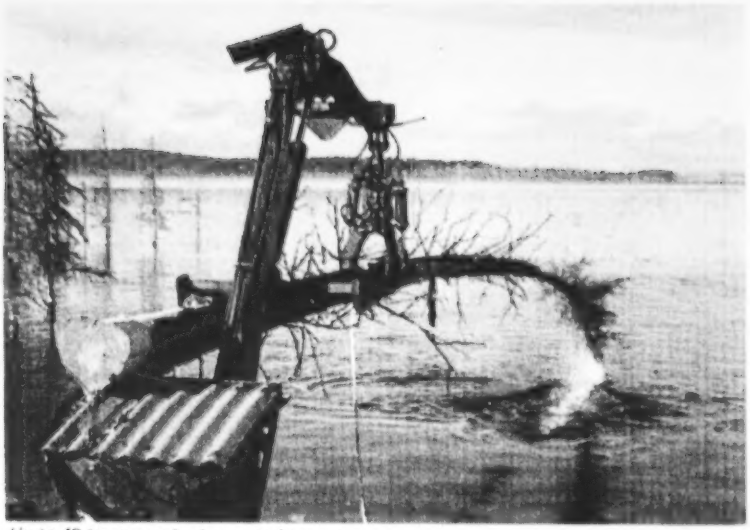
Within the arms of the heavy grapple is a scissors-like cutting tool which operates horizontally with one arm cutting and the other acting as an anvil. Up to 3,000 pounds per-square-inch hydraulic pressure can be applied to the blade which will cut trees as thick as 28 inches in diameter. The cut is as clean as that of a saw.

As soon as the tree is separated from its stump, the grapple holds it firmly and brings it to the surface where a hydraulic heel-boom loader, operated by a second man, grasps and loads it into a steel rack slung over the side of the scow. He must secure it quickly for the portion which has been submerged for over 20 years is water-logged and will sink rapidly, particularly if separated from its dry and buoyant top.

Meanwhile the barge has moved forward to another tree and is repeating the de-limbing, cutting and surfacing procedures. Up to 40 trees can be harvested in an hour.

The rack, consisting of two U-shaped steel arms, holds 25 to 60 trees, depending on their size. Care is taken to add several pieces of dry top for buoyancy and when the cradle is filled, the bundle is tied together by steel bands before it is set free for towing to the booming ground.

There the logs are taken ashore for sorting, bucking and drying. The dead tops are burned. The good timber is trucked about 50 miles to the Bond Bros. new sawmill near Vanderhoof where it is processed into framing lumber.



Up to 40 trees can be harvested in an hour.

Until this summer, the operation was purely a commercial venture, even though it did contribute to cleaning up the reservoir. Now the idea is more far-reaching and the intention is to remove all trees, regardless of value, extending above the surface at maximum draw-down level as well as those fully submerged but within 10 feet of that level.

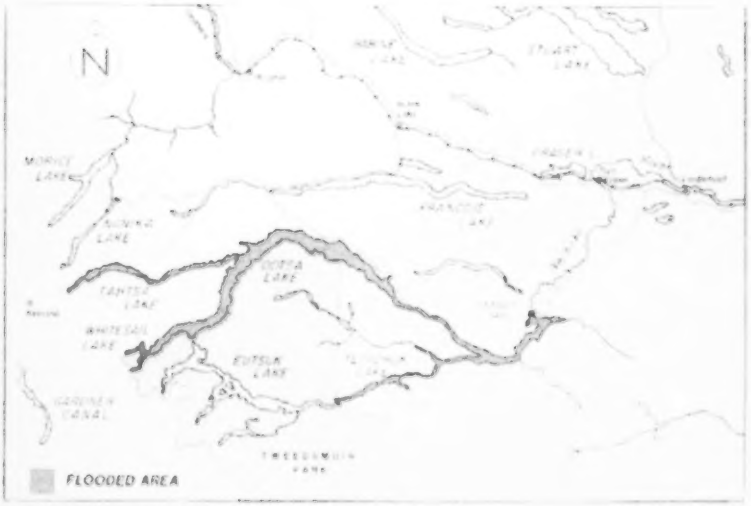
The Bond Bros. equipment is being used in the experiment but it cannot operate in waters less than 10 feet deep. Therefore, shoreline clearing will probably be conducted with bulldozers during draw-down period which occurs between the end of September and late May.

In addition, other equipment on Ootsa Lake, though still in the experimental stage and only suitable for shallow water work, may prove to be useful.

High water conditions prevail in the summer and the lakes are frozen in winter. Range between maximum high and low water levels is about 20 feet.

The pilot operation which was started in mid-summer is intended to determine the feasibility of clearing the entire reservoir with presently designed equipment, the estimated costs of such a program, classification of areas requiring treatment, allocation of priorities for clearing the different areas and the time required for a full clean-up.

A report on the operation and study should be complete by early next year. If it shows that a full scale clean-up of the reservoir is feasible, work will probably commence in the summer of 1974, and although a decade may be needed to accomplish the task, the flooded waters may yet be cleansed and cease to be a graveyard for standing trees.



Nechako Reservoir Area

The Christmas Tree Harvest

Would you believe that most of B.C.'s best Christmas trees are produced under some of the poorest growing conditions?

It's true. Close to 80 percent of our annual crop of over a million Christmas trees are removed from the relatively unproductive soil of the semi-arid Rocky Mountain Trench in the East Kootenays. Most of them are Douglas firs.

Today's buyer wants a well shaped bushy tree with good colour and a clean fragrant scent. And of course it must not be dry. But the fast growing trees simply shoot up too fast and have too few boughs.

On the other hand, the slow growing tree which adds only 4 to 8 inches in height each year develops ideally for the demanding shopper who wants the most attractive tree in the neighbourhood for the Christmas festivities.

Even under the favourable conditions existing in the Trench between Cranbrook and Radium, nature needs a helping hand for best results—and in many cases she gets it. Pruning, thinning, fertilizing and slash burning are all part of proper management of a Christmas tree stand.

Although many trees are grown on privately owned property, the majority of the crop is cut from Crown forest land under permit. In fact the industry got its start back in the early 30's in the midst of the great depression when ranchers began to cut trees as a means of augmenting their meagre incomes.

Administration of these activities on Crown land is provided by the Forest Service. Permits to harvest trees are granted to local citizens on condition that they pay a 10¢ stumpage charge on each tree cut and perform four days of stand improvement work each year for every 1000 acres leased. The normal permit is for 2500 acres for which a minimum of 10 days work is required.

There are two distinct concepts for growing top quality trees. In one, pruning and shaping is undertaken with the annual removing just one tree from each plant or root system. In this case, the lower boughs are removed so that more energy will go into the upper part of the young tree, making it more vigorous and bushy. When the tree is cut a few years later, there is no life-sustaining foliage left, so the stump dies.

The second method is more sophisticated but usually results in producing several trees from each root system. In it, the Christmas tree farmer leaves two or more lower boughs when he harvests the first top. Through these remaining limbs, the plant absorbs the sunlight and carbon dioxide essential for life and further growth.

The boughs turn up and after about 10 years they often grow into another well-shaped Christmas tree. Farmers supporting this concept contend that it is not uncommon to harvest six or more "limb" trees from one stump.

Another common result of this practice of retaining lower boughs is the new growth which often sprouts at or near the juncture of the limbs and the main stalk. These "adventitious buds" frequently grow straight up and, with proper pruning, become shapely Christmas trees in about half the time required to produce them from seed.

As for any crop, harvesting brings the peak of activity and employment, and in this case, timing is regulated by weather and market requirements. Nearly 80 percent of the trees are exported to the U.S.A. and Mexico so it is necessary to ship them well in advance of the Christmas season.

However, trees must be exposed to some sharp frost and cold weather before cutting to "set" the needles, prevent rapid drying and preserve the desired rich green colour. Fortunately, the early cool autumns of the East Kootenays are usually ideal for harvesting by mid-October.

From cutting to final loading in a railway car, each tree may be handled up to 20 times. It is carried or dragged to assembly points in the woods for inspection and scaling to determine stumpage or royalty charges. Then the trees are trucked to a central collection yard for grading as to size and quality.

After tagging, they are bundled and piled until shipping time when they may be trucked to the boxcars or loaded directly by conveyor belt. In each handling reasonable care is essential to prevent damage.

Back in 1962, over two million trees were harvested for the Christmas trade but because of the development of artificial trees and the increasing popularity of plantation-grown Scots pines, demand for B.C. Douglas firs has been reduced to about one million trees annually.

Nevertheless, the Christmas tree farmers in southeastern B.C. are optimistic about the future and confident that with proper management of their stands, they can produce choice bushy trees of excellent form and fine quality which will compete favourably with anything on the market.

Several Christmas trees can be grown from each root system.

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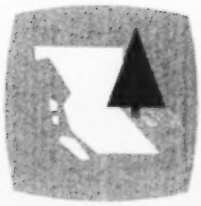

British Columbia Forest Service

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